

AMENDMENTS TO THE CLAIMS:

The following listing of claims replaces all prior listings, and all prior versions, of claims in the application.

LISTING OF CLAIMS:

1. (Previously presented) A reactor for producing a high molecular weight polyester, comprising:

(a) a substantially horizontal cylindrical vessel provided with an inlet at a lower part at one end thereof and with an outlet at the lower part at the other end thereof for a liquid feed, and with an outlet for volatile matters at the upper part thereof,

(b) a stirring rotor provided with support members, having a disk shape, at both ends of the stirring rotor, connecting support rods between the support members and a plurality of hollow disks in the longitudinal direction thereof within the cylindrical vessel, the stirring rotor being without any rotating shaft at position of a rotating center axis, and having an outer diameter which is equal to the outer diameter of said hollow disks, and

wherein the stirring rotor is further provided with scraping plates each between adjacent hollow disks, for scraping the liquid feed attached to the inside wall of the vessel, the outer diameter of the support member at the outlet side thereof for a liquid feed being smaller than the outer diameter of the stirring rotor, and provided with scraping vanes on the support member on the vessel inner end wall-facing side of the outlet side thereof.

2. (Previously presented) A reactor for producing a high molecular weight polyester, comprising:

(a) a substantially horizontal cylindrical vessel provided with an inlet at the lower part at one end thereof and an outlet at the lower part at the other end thereof for a liquid feed, and with an outlet for volatile matters at the upper part thereof,

(b) a stirring rotor provided with a support member having a disk shape at one end of the stirring rotor and another support member having a disk shape at the other end thereof, with a plurality of hollow disks in the longitudinal direction thereof within the cylindrical vessel, and having an outer diameter which is equal to the outer diameter of said hollow disks, and

wherein the stirring rotor is further provided with scraping plates each between adjacent hollow disks, for scraping the liquid feed attached to the inside wall of the vessel, the stirring rotor being without any rotating shaft at the position of a rotating center axis, wherein the outer diameter of the another support member, positioned at a side adjacent the outlet at the lower part at the other end of the cylindrical vessel, is smaller than the outer diameter of the stirring rotor, and wherein the stirring rotor is provided with scraping vanes on the another support member, on the vessel inner end wall-facing side.

3-6. (Cancelled).

7. (Previously presented) A reactor for producing a high molecular weight polyester, comprising:

(a) a substantially horizontal cylindrical vessel provided with an inlet at the lower part at one end thereof and an outlet at the lower part at the other end thereof for a liquid feed, and with an outlet for volatile matters at the upper part thereof,

(b) a stirring rotor provided with a support member having a disk shape at one end of the stirring rotor and another support member having a disk shape at the

other end thereof, and with a plurality of hollow disks in the longitudinal direction thereof within the cylindrical vessel, having an outer diameter which is equal to the outer diameter of said hollow disks, and

wherein the stirring rotor is further provided with scraping plates each between adjacent hollow disks, for scraping the liquid feed attached to the inside wall of the vessel, the stirring rotor being without any rotating shaft at the position of a rotating center axis, wherein the outer diameter of the another support member, positioned at a side adjacent the outlet at the lower part at the other end of the cylindrical vessel, is smaller than the outer diameter of the stirring rotor, wherein the stirring rotor is provided with scraping vanes on the another support member, on the vessel inner end wall-facing side, and wherein the stirring rotor within the vessel is divided into a plurality of stirring blocks having structure based upon the viscosity of the liquid feed.

8-11. (Cancelled).

12. (New) An apparatus adapted to produce a high molecular weight polyester from raw materials of an aromatic dicarboxylic acid or its derivative and glycols, the apparatus comprising:

a reactor comprising a substantially horizontal cylindrical vessel, and having one end and another end, an inlet for a treated liquid provided at the one end of the vessel, an outlet for the treated liquid provided at the other end of the vessel, and a stirring rotor which is provided and adapted to rotate in the vessel so as to stir polymerized matter,

said stirring rotor having a plurality of stirring blocks provided with stirring vanes having no shaft at a rotating center, said stirring blocks having the stirring vanes being different in structure from one another.

13. (New) An apparatus for producing a high molecular weight polyester according to claim 12, wherein the stirring vanes of the stirring blocks on a low viscosity side of the reactor and the stirring vanes of the stirring blocks on a high viscosity side of the reactor each have at least one scraping plate in the periphery, and the number of the stirring vanes on the high viscosity side is smaller than the number of the stirring vanes on the low viscosity side.

14. (New) An apparatus for producing a high molecular weight polyester according to claim 12, wherein the stirring vanes of the stirring blocks on a low viscosity side and the stirring vanes of the stirring blocks on a high viscosity side each have at least one hollow portion, and the area of the hollow portions on the high viscosity side is larger than the area of the hollow portions on the low viscosity side.

15. (New) An apparatus for producing a high molecular weight polyester according to claim 14, wherein the stirring vanes of the stirring blocks on the low viscosity side and the stirring vanes of the stirring blocks on the high viscosity side each have at least one scraping plate in the periphery, and the number of the stirring vanes on the high viscosity side is smaller than the number of the stirring vanes on the low viscosity side.